

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application Of: Matthew A. Purdy	Examiner: Marc M. Duncan
Serial No.: 10/810,037	Group Art Unit: 2113
Filed: 3/26/04	Att'y Docket: 2000.113500
For: M/A For Predicting Yield Parameters Based On Fault Classification	Client Docket: TT5607
	Confirmation No.: 8441

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby submit this Reply Brief to the Board of Patent Appeals and Interferences in response to the Examiner's Answer dated November 15, 2007.

No additional fee is believed due. The Commissioner is authorized to deduct any fees required under 37 C.F.R. §§ 1.16 to 1.21 from the Williams, Morgan & Amerson, P.C. Deposit Account No. 50 0786/2000.113500/sfd.

REMARKS

Independent claims 1, 14, and 27 include the general features of receiving fault classification data associated with a tool fault condition. The tool fault condition is associated with a process tool for processing a wafer. At least one yield parameter of the wafer is estimated based on the fault classification data.

As the Office Action admits Satya fails to teach fault classification data associated with a tool fault condition. Satya teaches measuring yield test structures formed on the wafer to estimate yield for the wafer. Hence, Satya directly measures yield wafer characteristics to estimate yield. The yield measurement for the test structures are extrapolated to determine yield estimates for the wafer.

In contradistinction thereto, Applicants use fault classification data associated with a tool fault condition for a process tool to estimate yield parameters. Using the fault classification data associated with the tool fault condition, the yield estimation may be performed without direct measurement of yield test structures. As a wafer progresses through the fabrication process, the cumulative effects of the processing in different tools may contribute to the yield estimate. Applicants provide the description of steps for generating fault classification data associated with a tool fault condition to illustrate what features are defined by the claim language. The fault classification data must include the prior steps of fault detection and classification by its very nature. Applicants classify a tool fault condition and use the classification of the tool fault condition to estimate yield parameters.

Hseih merely links a wafer fault condition with a suspect tool. Hseih does not classify a tool fault condition, but rather classifies a wafer fault condition and links that condition back to a particular tool. Applicants do not link fault classification data to a tool, but rather use fault classification data that classifies the tool fault condition to estimate yield parameters.

The fault classification data classifies the tool fault condition, and the tool fault condition is associated with the particular tool. The Office Action seeks to equate the identification of a suspect tool in Hseih with both the association of the fault classification data to the tool fault condition and to the association of the tool fault condition to the tool. At most, Hseih links a wafer fault condition to a tool.

Although the Office attempts to assert a broad reading of the terms “associated with,” the construction must be the broadest reasonable interpretation in light of the specification. The specification clearly discloses that the fault classification data classifies a tool fault condition (see p. 11, ll. 10-15), not a wafer fault condition. Merely linking a wafer fault to a particular tool does not classify a tool fault condition.

Thus, the art of record fails to obviate claims 1-27 under 35 U.S.C. § 102 (e). Applicants therefore pray that the rejections be reversed and the claims be allowed to issue.

Respectfully submitted,

Date: January 15, 2008

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